

wherein a thickness of the gate dielectric, t , is less than one-third a length of the gate electrode with up to a dielectric constant, k , of:

$$\underline{k} = \underline{k}_{ox}(\underline{t}/\underline{t}_{ox}),$$

where k_{ox} is the dielectric constant for a silicon dioxide film, and

t_{ox} is an equivalent silicon dioxide thickness for the gate length.

15. (Amended) An apparatus comprising:

a semiconductor substrate having a transistor device formed thereon, the transistor device

having a gate dielectric disposed directly between a surface of the substrate and a gate electrode

comprising:

a first dielectric material having a first dielectric constant; and

a second dielectric material having a second dielectric constant different from the first

dielectric constant,

wherein a thickness of the gate dielectric, t , is less than one-third a length of the gate

electrode with up to a dielectric constant, k , of:

$$\underline{k=k_{ox}(t/t_{ox})},$$

where k_{ox} is the dielectric constant for a silicon dioxide film, and

t_{ox} is an equivalent silicon dioxide thickness for the gate length.

REMARKS

In the parent application, claims 8-21 were examined. With the Preliminary Amendment, independent claims 8 and 15 are amended. Claims 8-21 remain in the application.

In the parent application, the Patent Office rejected claims 8-9, 12-13, 15-16 and 19-20 under 35 U.S.C. §102(e). The Patent Office rejects claims 10-11, 14, 17-18, and 21 under 35